GERAGHTY
& MILLER, INC.
Environmental Services

Ground Water *Engineering* *Hydrocarbon* *Remediation* *Education*

May 28, 1991

VIA FACSIMILE

Mr. Walter Nied
On Scene Coordinator
U.S. EPA (5HS-12)
230 South Dearborn
Chicago, IL 60604

Mr. Peter Felitti
Assistant Regional Counsel
U.S. EPA (5CS-TUB 03)
230 South Dearborn
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Re: Torch Lake Superfund Site, Houghton County, Michigan

Subject: Scope of Work Outline for Drum Removal Effort

Dear Messrs. Nied and Felitti:

On behalf of Universal Oil Products (the Respondent), Geraghty & Miller, Inc. has developed an outline for the Scope of Work (SOW) for the drum removal effort to take place at the Torch Lake Superfund Site in Houghton County, Michigan. The information provided herein is based on Geraghty & Miller's site inspections of May 1 and May 2, 1991, and on the recent site inspection and field meeting with the USEPA OSC, Walter Nied, conducted on May 22, 1991. Also considered in preparing this SOW outline is the information provided in the USEPA's 106 Order dated May 1, 1991; a viewing of the USEPA underwater videotape and draft Action memo; and the results of the two known drum sampling efforts conducted by USEPA subcontractors in June, 1989 and August, 1990. The approach outlined below was selected to provide protection of human health and the environment during drum characterization, staging, and removal activities while minimizing costs and being consistent with the 106 Order, the NCP, and appropriate EPA guidance.

Background - Previous Drum Investigations Conducted

It is our understanding that the USEPA has conducted at least two rounds of sampling on the drums located in four distinct areas on the western shore of Torch Lake. The four relevant drum location areas sampled (and the four areas addressed by this scope of work) are:

- Area 1 - Old Calumet and Hecla smelting mill site near Lake Linden
- Area 2 - Ahmeek Mill site
- Area 3 - Tamarack site
- Area 4 - Quincy site

Also addressed in this scope of work is the off-shore area in Torch Lake adjacent to these sites; drums have been found in the off-shore area adjacent to Area 1.

Analyses of the data made available to the Respondent from the USEPA drum sampling programs have indicated that of the 17 drum samples collected to date, only one of these samples is classified as a RCRA hazardous waste. Four additional drum samples have indicated the presence of hazardous substances, but did not demonstrate the characteristics of a hazardous waste.

At least three of the 17 samples collected were of drums that contained slag, and the results of the analyses performed on these samples have confirmed that the slag material is not hazardous. The non-hazardous nature of the slag is significant, since the vast majority of all the drums found in the areas of concern are filled with slag. The existence of these slag-filled drums appear to be part of an engineered erosion protection system, and not the result of waste drum deposition.

Results of a USEPA underwater investigation of the off-shore area near Area 1 indicated that drums are present below the water line in this area. The number or nature of the objects that appear to be drums in the under water videotape generated by the USEPA has not been accurately defined, however.

The USEPA has recently performed a round of underwater drum and sediment sampling near Area 1, the results of which are not yet available. As an ongoing RI activity, the USEPA is also planning a test pit activity during the week of June 1, 1991 to locate drums in areas that demonstrated anomalies on previous geophysical survey. The location of the areas on which the

test pits will be excavated are not known, as we do not have sufficient data on these studies.

Scope of Work Outline

The Respondent has developed an outline for the scope of work (SOW) to be implemented to fulfill the requirements of the 106 Order, assuming agreement with USEPA is reached on the outline of the removal program. This SOW, including details regarding the development of a Work Plan for the drum removal effort, is presented below.

Work Plan Development

The Respondent proposes to develop and submit a Work Plan for the removal activities specified in the 106 Order. The Work Plan will provide a concise description of the activities to be conducted to accomplish the tasks set forth in the SOW. This Work Plan will be subject to USEPA review and approval. The Respondent will implement the Work Plan as finally approved by the USEPA. Once approved, the Work Plan will be deemed to be incorporated into the Order. It is anticipated that the 106 Order will be converted to an Administrative Order on Consent.

The Work Plan will include a site health and safety plan (HSP), a sampling and analysis plan (SAP), a dive plan addressing underwater activities, and a schedule of work to be performed. The HSP will be prepared in accordance with the Occupational Safety and Health Administration (OSHA) regulations applicable to Hazardous Waste Operations and Emergency Response, 29 CFR Part 1910. The dive plan will be modelled after an example dive plan to be provided by USEPA. The Work Plan and other submitted documents will demonstrate that the Respondent can properly conduct the actions required in the Order.

Contractor Procurement

The Respondent has retained Geraghty & Miller, Inc. as a qualified contractor to undertake and complete the requirements of the Order. The Respondent understands that the USEPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors retained by the Respondent. In the event that the USEPA disapproves of a selected contractor, the Respondent will retain a different contractor to perform the work.

Removal Activities

In accordance with the Order, the Work Plan will include the performance of the four removal activities as specified in the Order. These four removal activities are listed below, along

with a description of how these activities will be fulfilled. Where appropriate, an area-by-area account of the activities to be performed is presented.

1) Stage all visible drums, sample the drums, and remove those containing hazardous materials.

There are drums present in Area 1 amongst the brick and rubble leading along a length of shoreline in Torch Lake. The action taken in this area will consist of removing all visible drums on the embankment leading into Torch Lake. Any additional drums underneath the currently visible drums that are uncovered during the removal process will be removed, as well. These drums will be segregated into potentially hazardous (e.g., tar-like semi-solid) and non-hazardous (e.g., wood, slag, and other obviously non-hazardous material) categories. The potentially hazardous drums will be overpacked, if necessary, and will be staged in a fenced area. Once the drums are staged, they will be visibly classified into different groups, and representative samples will be collected from the potentially hazardous drums. All samples of potentially hazardous substances will be analyzed for:

- Flash Point
- TCLP Metals
- Volatile Organic Compounds
- Semivolatile Organic Compounds

In Area 2, the vast majority of drums present consist of barrels filled with solid slag, which is the vitrified rock material (gangue) that was melted along with the copper when the smelting of the copper bearing rock was performed. It is apparent that the lines of slag-filled drums in this area were placed here as an engineered barrier to protect areas from water erosion from the pumpage of large quantities of water and crushed rock back to Torch Lake from the rock crushing operation that occurred there. The slag material from one drum on this site was sampled by a USEPA contractor (Weston, Inc.) on July 21, 1991. Only one drum of slag was sampled according to the USEPA contractor because it was believed to be representative of all the slag drums. The slag was analyzed for EP-Tox metals, total metals, volatile organic compounds, semi-volatile organic compounds, pesticides, PCBs, and cyanide. A review of the sampling results as presented in the Final Remedial Investigation Report for Operable Unit 1 (RI Report) revealed that the slag was non-hazardous. The RI Report also concluded that although the slag materials exhibited elevated levels of inorganic compounds, these materials do not contribute to site risk using reasonable exposure scenarios. To confirm the non-hazardous nature of the slag material found in the drums in Area 2, two additional drums of slag will be sampled. Since metals are the only potential contaminants of concern in the slag, the slag samples will be analyzed for TCLP-Metals to confirm the non-hazardous nature of the material. If the slag is

demonstrated to be toxic using the TCLP, the drums of slag will be removed and staged in a secured area. If the samples confirm the previous tests, and the slag is found to be non-hazardous, all slag drums will remain in place.

A visual inspection of Area 2 will be conducted to determine if any of the non-slag drums contain potentially hazardous materials. Drums that are RCRA-empty, and drums that contain obviously nonhazardous materials (e.g., wood, concrete, etc.) will remain in-place. One drum in Area 2 has been sampled by a USEPA contractor (Weston, Inc.) and found to contain 4,000 ppm of trichloroethylene; this drum does not appear to be related to site operation and appears to be the result of a recent unauthorized disposal. The potentially hazardous drums will be staged, sampled, and analyzed as described for Area 1 drums.

As with Area 2, Area 3 consists of a line of slag filled drums (along with some concrete rip rap) that was placed as an engineered barrier to prevent water erosion of the Soo Line spur and State Road M-26. Two of the slag filled drums in this area were sampled on August 1, 1990 by a USEPA contractor (Weston, Inc.). These slag samples were analyzed for flashpoint, TCLP metals, F-list solvents, volatile organic compounds, and semivolatile organic compounds. It can be concluded from a review of the Weston drum sampling results letter to the USEPA dated September 25, 1990, that the slag samples are non-hazardous. To confirm the results of the USEPA contractor's sampling of the slag drums in this area, two additional drums of slag will be sampled and analyzed for TCLP metals. If the slag is demonstrated to be toxic using the TCLP, the drums of slag will be removed and staged in a secured area. If the samples confirm the previous tests and the slag is found to be non-hazardous, all slag drums will remain in place.

An additional visual inspection of Area 3 will be conducted to determine if any anomalous non-slag drums exist in this area. Any non-slag drums that are RCRA-empty or contain obviously nonhazardous materials (e.g., wood, concrete, etc.) will remain in-place. Any potentially hazardous drums will be staged, sampled, and analyzed as described for Area 1 drums.

In Area 4, a visual inspection of the area for drums will be conducted. Area 4 contains the only drum of the 17 drum samples collected over the four areas addressed in this scope of work that was found to contain hazardous waste (F-Listed solvents). This hazardous drum was located in a wooded area with several other drums. Any non-slag drums that are RCRA-empty, and drums that contain obviously nonhazardous materials (e.g., wood, concrete, etc.) will remain in-place. Any potentially hazardous drums will be removed, staged, sampled, and analyzed as described for Area 1 drums.

2) *Sample drum location soils and remove all soils contaminated with Hazardous Substances.*

In all locations from which potentially hazardous drums are removed from the surface, all spilled contents from potential hazardous drums will be placed into the container from which the substances were spilled. The soil in the immediate area of the drum will then be visually inspected and screened with an Organic Vapor Analyzer (OVA) or similar device to check the soil for the presence of volatile organic compounds. If the visual inspection and OVA screening results in an indication that the soils may be impacted with hazardous substances, additional amounts of soil will be removed and drummed until subsequent screenings (or sampling of soil) reveals no such evidence of soil contamination.

3) *Conduct a geophysical investigation to determine if any buried drums are located on site including offshore to a depth of 30 feet.*

It is the Respondent's understanding that a geophysical investigation has already been completed for the Remedial Investigation of the site. It is also the Respondent's understanding that the anomalies found during this investigation are to be investigated by the USEPA with the construction of test pits in several areas on site during the week of June 1, 1991. The results and complete details of the geophysical investigations that have already been conducted on the site have not yet been made available to the Respondent. The Respondent does not intend, however, to repeat any work already completed on the site. Accordingly, the Respondent is prepared to discuss the nature and scope of any additional geophysical work necessary.

4) *Conduct an underwater survey to determine if any drums are located along the shoreline in Torch Lake to a depth of 30 feet contiguous to Respondent's property or place of business operation.*

The Respondent will subcontract with a USEPA-approved underwater contractor to perform an underwater inspection (with divers) of the western edge of Torch Lake off Areas 1, 2, 3, and 4. The specific areas of shoreline to be investigated will be determined after consultation with USEPA representatives. An EPA diver should accompany our contractor's diver(s) to assist and verify the inspection results. All underwater activities will be conducted following a USEPA-approved dive plan.

All drums located during the underwater survey will be tagged, numbered, and recorded in the log book. Those drums that are filled only with water or natural silt will be photo-documented and left in place. The other drums that do not exclusively contain slag or other natural or non-hazardous material will be sampled underwater, if possible. Those drums that are

closed and cannot be sampled under water will be removed, staged, and sampled on shore in the same manner as presented for Area 1 drums. Those drums that were sampled and are found to contain hazardous materials will be overpacked underwater, if possible, and removed. Once on shore, the excess water from the overpacks will be decanted to a bermed holding area.

Disposal of Materials

All materials containing hazardous substances, pollutants or contaminants that are removed during this operation will be disposed of or treated at a facility approved by the OSC and in accordance with the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C Section 6901, et seq., as amended, the U.S. EPA Revised Off-Site Policy, and all other applicable Federal, State, and local requirements.

Geraghty and Miller has prepared this SOW as part of settlement negotiations to assist the Respondent with this proposed drum removal effort, and is looking forward to any questions or comments you may have regarding this scope of work outline. If you have any questions or comments regarding the information contained within this letter, please do not hesitate to call me or Gary Kruger at (312) 263-6703.

Sincerely,
GERAGHTY & MILLER, INC.

Richard E. Bartelt, P.E.
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